

WHAT IS CLAIMED IS:

1. A print control apparatus for performing a printing operation in accordance with print data received from an information processing apparatus, comprising:

storing means for storing print data included in a print job;

printing-in-original-layout means for performing a printing process such that one logical page is printed on one printing medium in accordance with said print data;

printing-in-modified-layout means for performing a printing process such that a plurality of logical pages are printed on one printing medium in accordance with said print data; and

deleting control means which retains the print data in said storing means after one of the printing processes is completed and which deletes the print data from said storing means when both printing processes are completed.

2. A print control apparatus according to Claim 1, wherein

said printing-in-modified-layout means performs printing in a modified layout in which a plurality of logical pages are printed on one printing medium so as to produce as many sets of copies as specified in the print

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data; and

said deleting control means deletes the print data from said storing means when the printing in the modified layout for producing the specified number of sets of copies is completed.

3. A print control apparatus according to Claim 1, further comprising:

inputting means for inputting a command to specify that printing should be performed in a presentation mode; and

control means for controlling the respective printing means such that when the command specifying the presentation mode is input via said inputting means, both said printing in the original layout and said printing in a modified layout are executed for a single print job, while when the command specifying the presentation mode is not input via said inputting means, printing is executed in a specified layout for a single print job.

4. A method for controlling a print control apparatus for performing a printing operation in accordance with print data received from an information processing apparatus, said method comprising:

a storing step for storing print data included in a print job;

a printing-in-modified-layout step for performing a printing process such that a plurality of logical pages are printed on one printing medium in accordance with said print data; and

a deleting control step in which the print data stored in said storing step is retained after one of the printing processes is completed and the print data is deleted when both printing processes are completed.

5. A method according to Claim 4, wherein

said printing-in-modified-layout step performs printing in a modified layout such that a plurality of logical pages are printed on one printing medium so as to produce as many sets of copies as specified in the print data; and

said deleting control step deletes the print data stored in said storing step when the printing in the modified layout for producing the specified number of sets of copies is completed.

6. A method according to Claim 4, further comprising:

a inputting step for inputting a command to specify that printing should be performed in a presentation mode;

and

a control step for controlling the respective printing step such that when the command specifying the presentation mode is input in said inputting step, both said printing in the original layout and said printing in a modified layout are executed for a single print job, while when the command specifying the presentation mode is not input in said inputting step, printing is executed in a specified layout for a single print job.

7. An information processing apparatus for producing print data to be printed by a printing apparatus, comprising:

spooling means for temporarily storing input data to be printed;

determining means for determining a printing mode which has been set;

image representing data producing means for, in the case where said determining means determines that a predetermined printing mode has been set, producing first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting, on the basis of the data stored in said spooling means; and

print data producing means for producing one set of

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print data from the first image representing data and the second image representing data produced by said image representing data producing means.

8. An information processing apparatus according to Claim 7, wherein said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

9. An information processing apparatus according to Claim 8, wherein
said image representing data is a GDI function;
said image representing data producing means outputs the generated image representing data to image representing means of an operating system; and

said print data producing means produces print data depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

10. An information processing apparatus according to Claim 7, further comprising: deleting control means which

Claim 13, wherein

said printing manner setting means is capable of setting the number of sets of distribution copy data; and

said image representing data producing means produces as many sets of distribution copy data to be subjected to the second formatting as the number of sets specified by said printing manner setting means.

15. An information processing apparatus according to Claim 13, wherein said printing manner setting means is capable of further specifying whether a memo space is to be inserted into the distribution copy data, and wherein in the case where a memo space is specified to be inserted, said printing manner setting means produces image representing data including a logical page representing a memo space when producing the distribution copy data.

16. A method of controlling an information processing apparatus for producing print data to be printed by a printing apparatus, said method comprising:

a spooling step for temporarily storing input data to be printed;

a determining step for determining a printing mode which has been set;

a image representing data producing step for, in the

function received from the image representing means of the operating system.

19. A method according to Claim 7, further comprising a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

20. A method according to Claim 16, further comprising a printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

21. A method according to Claim 20, wherein said printing manner setting step is capable of setting a page layout in the formatting.

22. A method according to Claim 20, wherein said predetermined printing mode is a presentation mode; and

said image representing data producing step produces presentation copy data to be subjected to first formatting and also produces distribution document data to be subjected to second formatting.

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23. A method according to Claim 22, wherein
said printing manner setting step is capable of setting
the number of sets of distribution copy data; and
said image representing data producing step produces as
many sets of distribution copy data to be subjected to the
second formatting as the number of sets specified in said
printing manner setting step.

24. A method according to Claim 22, wherein said
printing manner setting step is capable of further
specifying whether a memo space is to be inserted into the
distribution copy data, and wherein in the case where a memo
space is specified to be inserted, said printing manner
setting step produces image representing data including a
logical page representing a memo space when producing the
distribution copy data.

25. A storage medium on which a printer driver program
for producing print data to be printed by a printing
apparatuses stored, said printer driver program comprising:

a spooling step for temporarily storing input data to
be printed;

a determining step for determining a printing mode
which has been set;

a image representing data producing step for, in the case where it is determined in said determining step that a predetermined printing mode has been set, first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting are produced on the basis of said data stored; and

a print data producing step for producing one set of print data from the first image representing data and the second image representing data produced in said image representing data producing step.

26. A storage medium according to Claim 25, wherein said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

27. A storage medium according to Claim 26, wherein said image representing data is a GDI function; said image representing data producing step outputs the generated image representing data to image representing means of an operating system; and said print data producing step produces print data

depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

28. A storage medium according to Claim 25, said printer driver program further comprising a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

29. A storage medium according to Claim 25, said printer driver program further comprising printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

30. A storage medium according to Claim 29, wherein said printing manner setting step is capable of setting a page layout in the formatting.

31. A storage medium according to Claim 29, wherein said predetermined printing mode is a presentation mode; and

said image representing data producing step produces

presentation copy data to be subjected to first formatting and also produces distribution document data to be subjected to second formatting.

32. A storage medium according to Claim 31, wherein said printing manner setting step is capable of setting the number of sets of distribution copy data; and

said image representing data producing step produces as many sets of distribution copy data to be subjected to the second formatting as the number of sets specified in said printing manner setting step.

33. A storage medium according to Claim 31, wherein said printing manner setting step is capable of further specifying whether a memo space is to be inserted into the distribution copy data, and wherein in the case where a memo space is specified to be inserted, said printing manner setting step produces image representing data including a logical page representing a memo space when producing the distribution copy data.

34. A printer driver program for producing print data to be printed by a printing apparatus, said printer driver program comprising:

a spooling step for temporarily storing input data to

be printed;

a determining step for determining a printing mode which has been set;

a image representing data producing step for, in the case where it is determined in said determining step that a predetermined printing mode has been set, first image representing data to be subjected to first formatting and second image representing data to be subjected to second formatting are produced on the basis of said data stored; and

a print data producing step for producing one set of print data from the first image representing data and the second image representing data produced in said image representing data producing step.

35. A printer driver program according to Claim 34, wherein

said first formatting is a process of placing one logical page of said data to be printed on one logical page of image representing data and said second formatting is a process of placing a plurality of logical pages of said data to be printed on one logical page of image representing data.

36. A printer driver program according to Claim 35, wherein

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said image representing data is a GDI function;

said image representing data producing step outputs the generated image representing data to image representing means of an operating system; and

said print data producing step produces print data depending upon a printer language in accordance with the GDI function received from the image representing means of the operating system.

37. A printer driver program according to Claim 34, said printer driver program further comprising: a deleting control step in which the data to be printed, stored in said spooling step, is retained after one of the formatting processes is completed and the data is deleted when both formatting processes are completed.

38. A printer driver program according to Claim 34, said printer driver program further comprising printing manner setting step capable of performing setting associated with the first formatting and the second formatting at the same time via a user interface window.

39. A printer driver program according to Claim 38, wherein said printing manner setting step is capable of setting a page layout in the formatting.

40. A printer driver program according to Claim 39,
wherein

said predetermined printing mode is a presentation
mode; and

said image representing data producing step produces
presentation copy data to be subjected to first formatting
and also produces distribution document data to be subjected
to second formatting.

41. A printer driver program according to Claim 40,
wherein

said printing manner setting step is capable of setting
the number of sets of distribution copy data; and

said image representing data producing step produces as
many sets of distribution copy data to be subjected to the
second formatting as the number of sets specified in said
printing manner setting step.

42. A printer driver program according to Claim 40,
wherein said printing manner setting step is capable of
further specifying whether a memo space is to be inserted
into the distribution copy data, and wherein in the case
where a memo space is specified to be inserted, said
printing manner setting step produces image representing

46. An information processing apparatus according to Claim 43, wherein said setting means is capable of setting an arbitrary combination of output formats.

47. An information processing apparatus according to Claim 43, wherein said producing means comprises:

storing means for storing, in a predetermined data format, said data to be printed and output form information indicating the plurality of output format set by said setting means;

converting means for converting the data to be printed stored in the predetermined data format in said storing means into print data so as to obtain printing outputs in the output formats indicated by the output form information stored in the said storing means; and

print job producing means for producing a plurality of print jobs by producing, using said converting means, print data corresponding to the respective output formats set by said setting means.

48. An information processing apparatus according to Claim 43, wherein said execution control means transmits the print job produced by said producing means to the printing apparatus.

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49. A method of controlling an information processing apparatus for producing print data to be printed by a printing apparatus, said method comprising:

setting step capable of setting a plurality of output formats for one piece of data to be printed;

producing step for producing, from the data to be printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

50. A method according to Claim 48, wherein said setting step is capable of setting a combination of predetermined output formats.

51. A method according to Claim 50, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

52. A method according to Claim 49, wherein said

setting step is capable of setting an arbitrary combination of output formats.

53. A method according to Claim 49, wherein said producing step comprises:

a storing step for storing, in a predetermined data format, said data to be printed and output form information indicating the plurality of output format set in said setting step;

a converting step for converting the data to be printed stored in the predetermined data format in said storing step into print data so as to obtain printing outputs in the output formats indicated by the output form information stored in the said storing step; and

a print job producing step for producing a plurality of print jobs by producing, using said converting step, print data corresponding to the respective output formats set in said setting step.

54. A method according to Claim 49, wherein said execution control step transmits the print job produced in said producing step to the printing apparatus.

55. A storage medium on which a program for producing print data to be printed by a printing apparatus is stored,

said program comprising:

a setting step capable of setting a plurality of output formats for one piece of data to be printed;

a producing step for producing, from the data to be printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

an execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

56. A storage medium according to Claim 55, wherein said setting step is capable of setting a combination of predetermined output formats.

57. A storage medium according to Claim 56, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

58. A storage medium according to Claim 55, wherein said setting step is capable of setting an arbitrary combination of output formats.

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printed, a plurality of print jobs including print data corresponding to the plurality of output formats set in said setting step; and

an execution control step for controlling execution such that printing is executed in accordance with the plurality of print jobs produced in said producing step.

62. A program according to Claim 61, wherein said setting step is capable of setting a combination of predetermined output formats.

63. A program according to Claim 62, wherein said combination of predetermined output formats includes a first output format in which one page is output on one sheet and a second output format in which a plurality of pages are output on one sheet.

64. A program according to Claim 61, wherein said setting step is capable of setting an arbitrary combination of output formats.

65. A program according to Claim 61, wherein said producing step comprises:

a storing step for storing, in a predetermined data format, said data to be printed and output form information

